



The Math of JUNK MAIL

May 10, 2009 -- David R. Wetzel

Junk mail arrives in mail boxes everyday and is thrown in trash cans or recycling bins. This mail is a nuisance and comes in the form of unwanted advertising. Junk mail is an excellent resource for us to study a problem people face every day. Instead of throwing unsolicited advertisements away, we are going to put this unwanted mail to work in our classrooms.

The Dirt on Junk Mail

- More than 100 million trees are destroyed each year to produce junk mail.
- State and local governments spend hundreds of millions of dollars each year to collect and dispose of junk mail that does not get recycled.
- 28 billion gallons of water are wasted to produce and recycle junk mail each year.
- 44 percent of all such mail goes into landfills unopened.

So What?

Over the next couple of weeks we are going to be collecting junk mail and tracking a variety of related aspects of the mail. To calculate the amount of unwanted mail received you will:

- collect data for each piece of junk mail received in a data table or spreadsheet program individually, in groups, and as a whole class.
- record data for each piece of mail such as weight and category of mail. Categories include catalog, advertisement, solicitation, and others based on type received.
- record the zip code of each piece of mail using Google maps. This will be used to calculate the distance each piece of mail traveled from sender to receiver.
- place a mark on the map to indicate the sender's location.

After the junk mail collection period is over, you will spend the next two days analyzing data to calculate the:

- weight of all mail received.
- cost to mail at \$7.04 per pound.
- total miles traveled to reach your homes.
- total cost to transport at \$0.55 cents per mile.
- prepare a presentation to present your findings to the class.

Predictions

- How much junk mail will the class collect in a month? Year?
- What is the expected cost of the mail the class collects for a month? For a year?

- How much does it cost to transport the unwanted mail in a month? In a year?
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First Step

- Develop a definition of junk mail.
- Create categories for junk mail.
- Start collecting!